

CITY OF DALLAS
HEALTH AND HUMAN SERVICES
AIR POLLUTION CONTROL SECTION

CONSOLIDATED CASTINGS
2424 Caroline Street
Dallas, Texas 75201
Phone: 214/448-9501
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Inspector: John Travis, R. S.
Date: 3/17/86
MSSL: DB-0202-M
Mapsco: 45F

TYPE OF OPERATIONS: Investment casting production.

HISTORY/MANAGEMENT: Consolidated castings operates as a subsidiary of Rochester Gauges Inc. which is owned by Jack La Due. The plant has been at its present location since 1966. Larry Comunale is Vice President and General Manager. Tom Cumins is Operations Manager and was contacted for the survey.

PLANT OPERATIONS: Normal hours of operation are from 7:30 a.m. to 4:00 p.m. five days per week. There is a small second shift in the wax injection department. There are 124 employees.

RAW MATERIALS AND PRODUCTION DATA: Approximations for 1985.

Steel (stainless and alloy)	75,000 pounds per month
Ground zircon	1,500 pounds per month
Wax	750 pounds per month
Ground fire brick	12,000 pounds per month
Colloidal silica	3,125 gallons per month
Natural Gas	10,000 MCF per month

PROCESS: A tooling of the desired item is presented by the customer. Hot wax is injected into the tooling in automatic or manual wax processing. The resultant wax patterns are exact duplicates of the castings to be made. The wax is then coated within a liquid suspensions of ground zircon, ground fire brick and colloidal silica. After drying, the wax is removed from the mold in an autoclave (wax is melted out). The molds are heated in one of three gas-fired ovens. The steel is melted in a 325 Power Track induction furnace. The metal is cast into the molds and allowed to cool. The castings are removed from the molds by sawing, water spray, and sandblasting.

EMISSION SOURCES:

1. Bake out furnaces - These three furnaces preheat the molds. Occasionally some wax is left in the molds and this burns and causes smoke emissions.
2. Particulate sources of minor significance include the one abrasive cutoff (saw) machine, shot blasting and casting process.

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3. Boiler - a 30 hp boiler is used to produce steam for the autoclave. This is gas fired.
4. Other gas fired units include a hot acid/base bath. This unit is used on special type castings to dissolve small pieces used in casting holes in parts.

EMISSION CONTROL:

1. Afterburner unit on bake out furnaces. This is used to control smoke from wax. Apparently there is some difficulty in keeping this unit in operation as smoke has been observed.
2. A wet baffle booth on the abrasive cut off saws.
3. A Goff rotoblaster - emissions from this unit are controlled by a pulse baghouse.

HOUSEKEEPING: Fair

ATTITUDE OF MANAGEMENT: Very cooperative.

COMMENTS: The plant was operating at approximately 80% capacity at the time of inspection and appeared to be in compliance with applicable regulations. The plant is to be closed in May 1986 and will relocated to a site in Hutchins, Texas.

John Travis

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